News release

Heatwaves set to rise

1 September 2006

European heatwaves are likely to become much hotter and much more frequent during the course of this century, states new research by the Met Office Hadley Centre.

A paper published today in the *Journal of Climate* states that extreme summer temperatures are expected to increase if atmospheric CO2 concentration doubles, as it is expected to over the course of the century. North and South America and east Asia are expected to be affected as well as Europe.

Using multiple simulations to quantify uncertainty, Met Office scientists obtained some sobering results. These simulations indicate that European heatwaves could become hotter by between 4 and 10 °C — an increase greater than that expected for normal summer days.

In the UK, severe heatwaves lasting five days or more, such as occurred in July 2006, happen now approximately once every 20 years. By 2100 the new research shows such heatwaves are likely almost every year, and could even occur several times each summer.

Met Office scientists also examined possible mechanisms behind the increases, finding that drier soils resulting from drier summers and reduced cooling at night were largely responsible.

More about the Met Office Hadley Centre

Notes to editors:

The paper, 'Modeling northern hemisphere summer heat extreme changes and their uncertainties using a physics ensemble of climate sensitivity experiments', by Robin Clark, Simon Brown and James Murphy of the Met Office Hadley Centre, is published in the *Journal of Climate*, Vol. 19, No. 17, pages 4,418–4,435, dated 1 September 2006.

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